The Rocket Blog

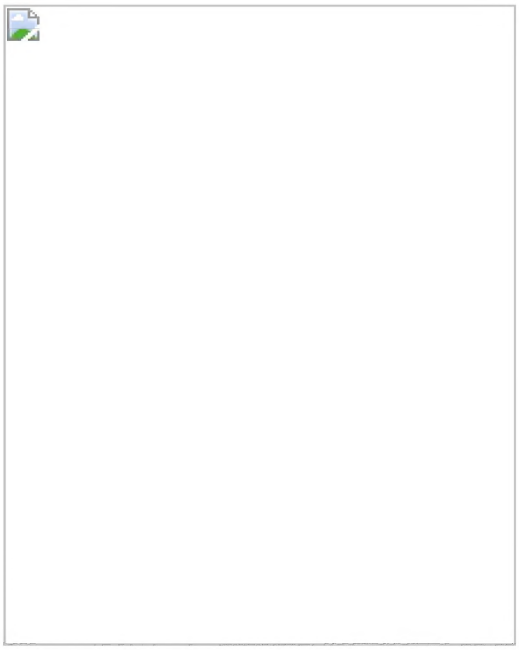
A blog about anything related to rockets and space technology from news to how to make your own propellant.

MONDAY, JULY 2, 2012

How to make blackpowder

Black powder was invented by the Chinese 2 millenia ago and used in their own fireworks and rockets to celebrate their feasts. It's the oldest propellant of History and now you understand why I had to begin with.

Making black powder is very simple but you must follow some rules if you want it to work properly.



A black powder-powered rocket. Note that it makes a lot of smoke.

You'll require 3 different chemicals : potassium nitrate (also known as saltpeter, you can find it easily in any garden store, it's a stump remover), charcoal and sulfur. You can find them in the link I provide to the right.

Now that you have all the chemicals, crush them SEPARATELY (never crush, grind, etc the chemicals together, some composition are very sensitive and can be ignited easily) to a fine powder. This is the most important rule, the chemicals have to be the finest possible if you want a usable powder.
If the grains are coarse, the black powder will not burn correctly. To do the job you can use a ball mill or a mortar and a pestle.

Once you have the finest powders possible, mix them well with the following proportion : 75% potassium nitrate (KNO_3), 15% charcoal and 10% sulfur by weight.

You can now use it as it is (for pyrotechnic purpose for example) but it needs to be binded in order to stay in the rocket engine. I never tried it but I'm pretty sure that a binder like red gum can do the job.

I don't have the habit to use black powder in my engines because I use a more powerful and easier to shape alternative to black powder. I will describe it later in the week.

Have fun with your own homemade black powder.

Unknown at Monday, July 02, 2012

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